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Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Re: Summary Disclosure of Oral *Ex Parte* Presentation: PP Docket No. 00-67 (Compatibility Between Cable Systems And Consumer Electronics Equipment) and CS Docket No. 97-80 (Implementation of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices)

Dear Secretary Salas:

On December 20, 2001, personnel of the FCC and Sony Electronics, Inc. and Sony Pictures Entertainment (collectively, "Sony") participated in a site visit and tour of Sony Electronics' video glass and television manufacturing facilities in Pittsburgh, Pennsylvania. A detailed discussion of issues concerning the transition to digital television followed the tour.

FCC Participants:

Rick Chessen, Mass Media Bureau (chair of FCC DTV Task Force)
William Johnson, Cable Services Bureau
Michael Lance, Cable Services Bureau
Robert Pepper, Office of Plans and Policy
Jonathan Levy, Office of Plans and Policy
Robert Bromery, Office of Engineering and Technology
Alan Stillwell, Office of Engineering and Technology

Sony Participants:

Chuck Gregory, Sony Technology Center-Pittsburgh
Hiroshi Tsukii, Sony Technology Center-Pittsburgh
Teresa Huber, Sony Technology Center-Pittsburgh
Michael Koff, Sony Technology Center-Pittsburgh
Mark Eyer, Digital Platform Division of America, Sony Electronics
Ian Matthews, Visual Products of America, Sony Electronics
James Williamson, Technology Standards Office, Sony Electronics
Joel Wiginton, Government Affairs, Sony Electronics
John Godfrey, Government Affairs, Sony Electronics
Mitch Singer, Sony Pictures Entertainment
Jeffrey Cunard, Debevoise and Plimpton (counsel to Sony Corporation)

The participants discussed the status of the transition to digital television (DTV). Sony observed that significant progress has been made by all industry sectors involved, including content providers, broadcasters, cable and satellite operators, and consumer electronics manufacturers. The plant tour showcased the substantial investment by Sony in bringing DTV products to the consumer marketplace, including high resolution digital monitors and integrated high definition TV receivers.

Sony expressed the view that digital capability should be added to DTV products in response to consumer demands. A government mandate to put digital tuners and the necessary additional digital audio-visual processing circuitry for over-air digital reception in all TV receivers would not foster a true transition to DTV, because the majority of consumers receive TV through cable or satellite. Most of these consumers would be unlikely to set up an antenna or take the trouble to switch their input source to an antenna for over-air digital programming and back to cable and satellite for other programming.

The discussions focused on two remaining areas in which technical collaboration across industry sectors is a prerequisite to a future, rapid rise in consumer demand for DTV:

1. Cable compatibility. Most consumers now receive TV signals through cable. Additional progress, building upon important technical work already completed by the cable and electronics industries, is needed to ensure the compatibility of digital cable-ready consumer electronics with cable systems nationwide.
2. Content protection. Consumers will be motivated by an increased variety of high-quality TV content, such as high definition TV. One prerequisite for availability of such content is industry agreement and implementation of techniques for protecting digital content from unauthorized copying and redistribution outside the home.

1. Cable compatibility

Sony expressed its strong commitment to develop and bring to the market products that are digital cable ready, including integrated DTV receivers, personal video recorders, home networking products, and others. Sony believes that to meet consumer demands in a competitive retail marketplace, digital cable-ready products require at least the following capabilities:

1) receive a digital picture from the cable system without mediation by another device (*e.g.*, a set top box), other than a security module provided by the cable operator for controlling secure access to premium content and services;
2) enable the consumer to navigate the vast array of digital programming with a convenient navigation interface and accurate program and schedule information;
3) enable the consumer to perform impulse pay-per-view (IPPV) and other simple interactive TV functions;

4) be portable (*i.e.*, able to provide the above functions on most cable systems nationwide), so consumers can use their products if they move to a location served by a different cable system and so manufacturers can make products for a nationwide market; and
5) incorporate additional innovative designs, features, and capabilities to add value and increase consumer satisfaction.

Sony lauded the significant progress that has been made by the cable and electronics industries to date, particularly in the area of consensus standard setting. Sony further discussed the status and remaining steps to achieve digital cable compatibility in each of the five areas of essential product capability listed above, as summarized in the following checklist.

1) Cable connection with secure access control

    a. The cable and electronics industries have reached agreement on the essential consensus voluntary technical standards for connection to the cable network and for separate security modules known as Point of Deployment (POD) modules—specifically, SCTE standards DVS/313 (network interface), DVS/295 (POD-Host Interface), and DVS/301 (POD copy protection).
    b. To the best of Sony's knowledge, most cable operators have not yet finished implementing the above-listed voluntary standards in their cable systems. Announced timetables for implementation in cable systems would facilitate manufacturers' planning and provide necessary clarity for investing in digital cable ready product development.
    c. Sony recognizes the significant demands on the cable industry's testing infrastructure—particularly, the facilities of CableLabs—as cable operators upgrade their systems and deploy new customer equipment to incorporate new technologies. Manufacturers of cable ready consumer electronic products for retail sale depend upon this same infrastructure to verify their POD-enabled host implementations for interoperability with cable systems nationwide. To accommodate the substantial increase in demand for testing as manufacturers develop retail digital cable ready products, increased access to testing facilities such as CableLabs is needed now to enable manufacturers to test their POD-enabled host implementations comprehensively.[1]

2) Navigation issues

    a. Consensus standards containing provisions for transmission of program and schedule information are complete, covering both in-band (the ATSC A/65

[1] Sony recognizes CableLabs' past, successful development of capabilities for testing DOCSIS cable modems. Sony anticipates that testing of digital cable ready products will place significantly greater demands on the available testing infrastructure.

Program and System Information Protocol (PSIP) specification) and out-of-band (DVS/234) modes.

b. The February 2000 technical agreement between the National Cable and Telecommunications Association (NCTA) and the Consumer Electronics Association (CEA) specified that cable operators will not remove PSIP data from the programming supplied to them by content providers (*e.g.*, broadcast and cable networks).[2] To the best of Sony's understanding, individual cable operators have not yet stated their timetables to implement this part of the agreement, which will require, for example, investment by operators in remultiplexing equipment with the specific technical capabilities to re-insert PSIP data into the digital signals sent to cable subscribers. As noted above, specificity about the timing of implementation in cable systems would give manufacturers necessary clarity in planning their product development.
c. Cable content providers (*e.g.*, cable and broadcast TV networks) were not part of the February 2000 NCTA-CEA agreement, and it is uncertain whether they will supply PSIP data with the signals they supply for cable distribution.
d. Uncertainty remains with regard to handling of the channel numbering aspect of navigation in a cable-ready DTV receiver. Broadcasters recommend the use within cable systems of the two-part (major/minor) channel numbering scheme that is part of the terrestrial broadcast standard, while the cable community supports one-part numbers (1–999). This ambiguity has thus far prevented completion of a recommended practice for DTV receivers with regard to channel number handling.

3) IPPV and other simple interactive functions

a. The completed consensus cable compatibility standards (DVS 313, DVS 295, DVS 301, and DVS 234) provide functionality for impulse pay-per-view (IPPV). As a next step, manufacturers require access to comprehensive testing services for IPPV in order to develop products with confidence that they will function on cable systems nationwide.[3] Sony believes it should be possible to proceed with testing of IPPV implementations without waiting for completion of the OpenCable Application Platform (OCAP) specification and its implementation in cable systems.

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[2] *Compatibility Between Cable Systems and Consumer Electronics Equipment*, Report and Order, PP Docket No. 00-67, 15 FCC Rcd 17568 ¶¶ 34-36 (rel. Sept. 15, 2000); and *Erratum* in PP Docket No. 00-67 (OET rel. Oct. 25, 2000) (setting reporting requirements on implementation of the agreement).

[3] For example, Matsushita Electric Corporation of America, in an *ex parte* notice to the FCC on April 20, 2001, reported having been told by CableLabs that CableLabs "will not address testing of IPPV contained in the completed OpenCable POD-Host specification, until CableLabs completes its ongoing specification for OCAP application middleware." Matsushita Electric Corporation of America, "*Ex Parte* Presentation in CS Docket 97-80," April 20, 2001.

4) Nationwide portability

   a. To the best of Sony's understanding, most cable operators who have recently deployed digital technologies have done so with proprietary solutions for the essential digital cable ready features—conditional access, program and schedule information, and impulse pay-per-view—instead of the consensus SCTE standards. For this reason, additional investments and upgrades in cable systems may be necessary before nationwide digital cable portability is achieved.
   b. It is Sony's understanding that facilities for testing the interoperability of the essential digital cable ready features of products—conditional access, program and schedule information, and impulse pay-per-view—with cable systems nationwide are not currently available for manufacturers to use. Access to testing facilities for this scope of testing should be available to manufacturers separately from product certification services, including certification to bundles of specifications that are broader than what Sony sees as the essential requirements for a functional, competitive digital cable ready product.

5) Flexibility to innovate

   a. Under the POD-Host Interface License Agreement (PHILA), POD-enabled devices must be certified by CableLabs compliant with a broad suite of OpenCable specifications.[4] The scope of this suite goes beyond what Sony believes are the essential elements of POD-enabled security—adherence to the PHI standards, robust protection of the digital keys, and routing of copy-protected digital content to protected digital outputs. For example, the broader scope of the suite required by the PHILA includes attributes such as product performance and the look and feel of the user interface. Although cable operators may very reasonably wish to require these specifications when purchasing equipment for renting to their subscribers, it is not technically necessary that the broader specifications also be required of manufacturers producing digital cable ready products for retail. The PHILA's mandate of certification to this broader range of specifications would reduce the capacity for innovation by manufacturers in areas such as product performance and user interface design. In Sony's view, this would likely lead to product uniformity and less overall consumer satisfaction.
   b. Cable operators have stated that to interoperate with cable systems to provide services such as IPPV, video on-demand, and advanced program guides, digital cable ready products must implement the OpenCable Application Platform (OCAP) specification. As noted above, Sony believes that it should be technologically possible to produce digital cable ready devices by implementing the currently available consensus standards, provided that

[4] Richard Green, *Letter to FCC Chairman Michael Powell*, July 2, 2001, filed in CS Docket 97-80.

manufacturers have access to facilities for testing the interoperability of their implementations with cable systems nationwide. For this reason, waiting for completion of OCAP would cause an unnecessary delay in bringing digital cable ready products to consumers. Moreover, the version of OCAP available at the time of this meeting specified a Monitor Application which determines what software applications may run in the device and prevents applications from running unless supplied by or accepted by the cable operator. To the extent that the completed OCAP specification requires devices to support only cable operator-provided applications, Sony is concerned that it would prevent innovation by manufacturers in developing alternative applications to meet diversified consumer demands.

2. Content protection

Both Sony Electronics and Sony Pictures Entertainment were represented during the discussion on copy protection. Sony updated the FCC on the substantial progress that has been made to date in developing, gaining industry consensus, and licensing technology for protecting digital content (*e.g.*, DVD, cable and broadcast DTV programming) from unauthorized copying and redistribution outside the home. Specifically, Sony described the licensing agreement reached in July 2001 between the "Five Companies" (5C; Hitachi, Intel, Matsushita, Sony and Toshiba) and each of Sony Pictures Entertainment and Time Warner to protect digital content using a copy protection technology known as Digital Transmission Content Protection (DTCP). DTCP protects content transmitted digitally via a controlled access system by means of cryptography and authentication. DTCP has first been mapped to the i.Link/IEEE 1394 bus, but may be used in conjunction with other bilateral digital buses. Once the digital content is received in the home and is routed to a DTCP-enabled output, the technology can then be used to protect digital content circulated within a home network (*e.g.*, between devices such as cable set top boxes, digital television sets, and personal video recorders).

Sony also described ongoing work taking place to reach a multi-industry consensus on a technological method to protect content that has been received via an over-the-air digital television signal from unauthorized redistribution outside the home (such as to the Internet). Sony explained that the 5C companies had presented a statement of the technical problem and of a proposed high-level technical solution to the Copy Protection Technical Working Group on November 28, 2001. In the wake of that meeting, a Broadcast Protection Discussion Group and an associated reflector have been established. Participants in the group include representatives from all of the affected industries, and all parties have agreed to work on an expedited basis to reach such a technological solution. The target date for completion of the work has been set for the end of the first quarter of 2002. Once the affected parties arrive at a consensus technological solution, Sony believes that it will necessary for the government to impose a narrowly-tailored regulatory or statutory mandate requiring the appropriate products to implement and

respond to the agreed upon technological solution. This will be necessary to ensure that the obligations to detect and protect signaling means in DTV content are imposed upon *all* the apposite products in an even-handed manner.

Sony hopes and expects that this ongoing multi-industry technical work at the Broadcast Protection Discussion Group, the implementation of the agreed-upon technical solution, and the development and implementation of means of enforcement will remove significant remaining hurdles to the provision of digital television content, thereby accelerating the transition to DTV.

Sincerely,

/s/ John Godfrey

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